

ATP as modulator of carbacholine effect on contractility of rat myocardium in postnatal ontogeny

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Abstract

We studied combined effect of 2-m-ATP, P 2 receptor agonist, and carbacholine, muscarinic M 2 cholinoreceptor agonist, on contractility of rat myocardium during the postnatal ontogeny. Activation of P 2 receptors can stimulate or attenuate the effects of carbacholine depending on animal age. 2-m-ATP potentiates the inhibitory effect of carbacholine on myocardial contractility in 14- and 100-day-old rats. In 21-day-old rats, activation of P 2 receptors prevented the negative effect of carbacholine on myocardial contractility. Activation of muscarinic M 2 receptors inhibited the inotropic effect of purine in all age groups. © 2009 Springer Science+Business Media, Inc.

<http://dx.doi.org/10.1007/s10517-009-0664-2>

Keywords

Contractility, Muscarinic cholinoreceptors, Myocardium, Ontogeny, P 2 receptors